

FIG.1

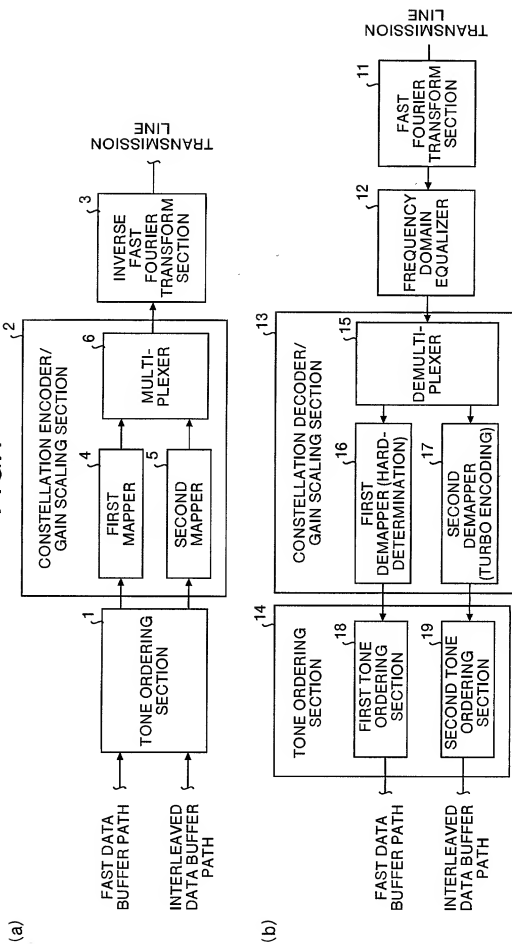


FIG.2

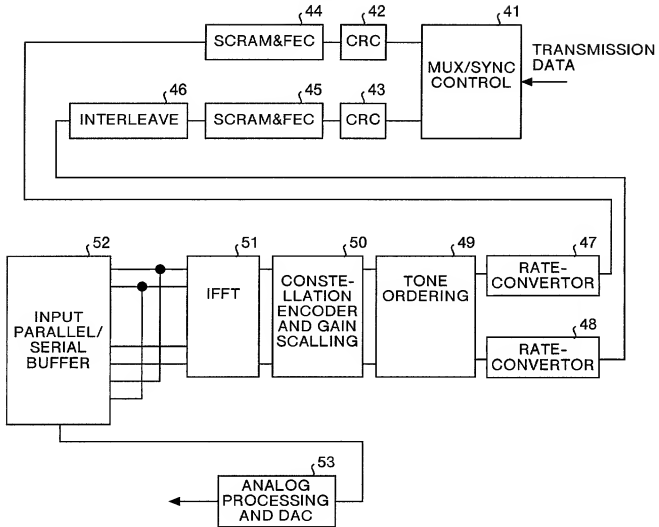


FIG.3

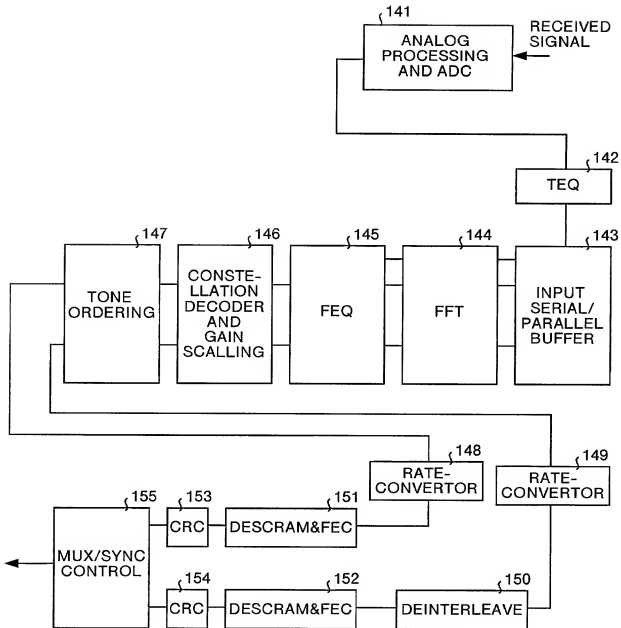
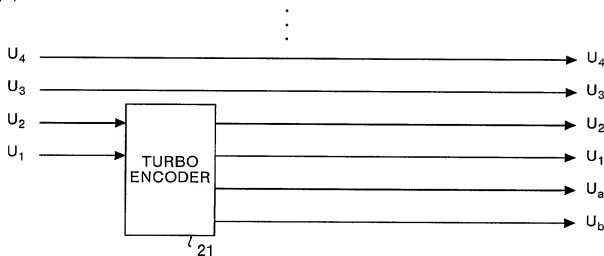


FIG.4

(a)



(b)

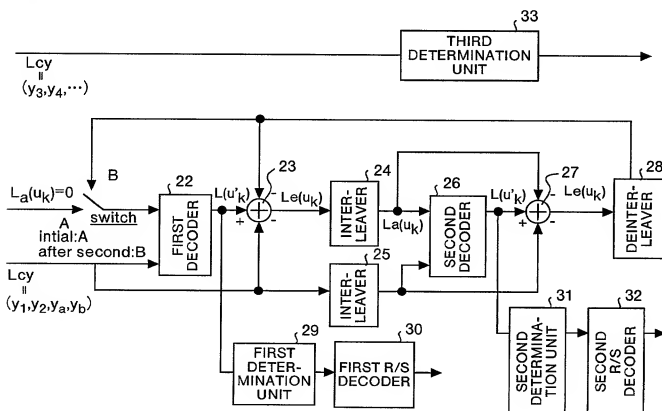
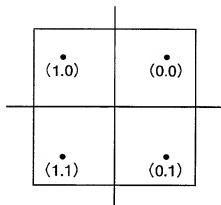
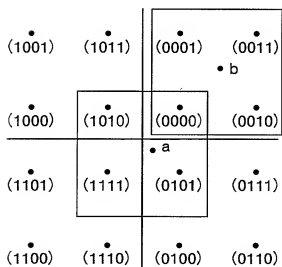


FIG.5

(a)



(b)



(c)

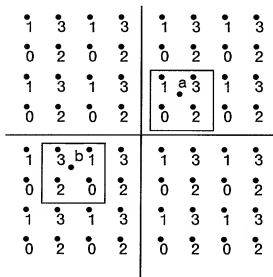
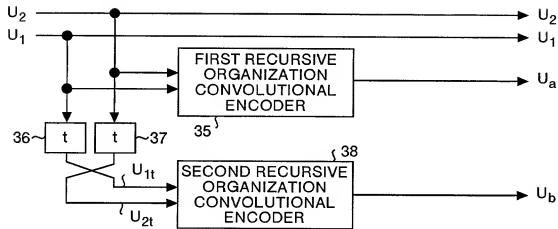


FIG.6

(a)



(b)

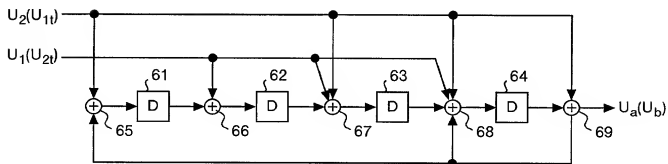


FIG.7

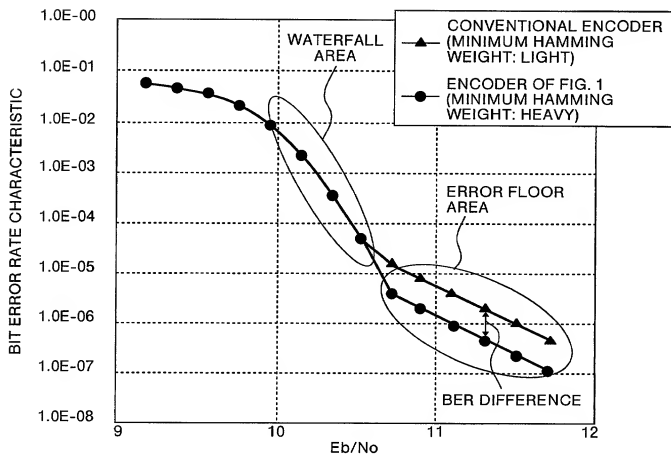


FIG.8

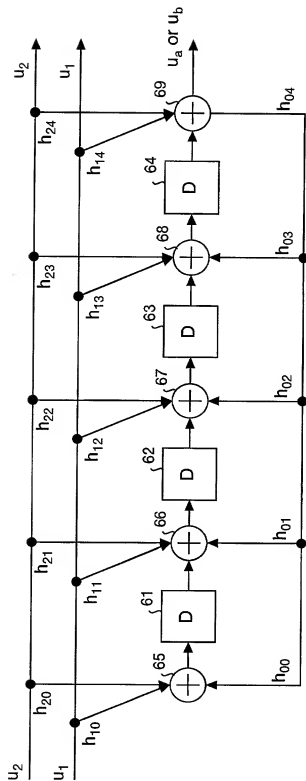




FIG.9

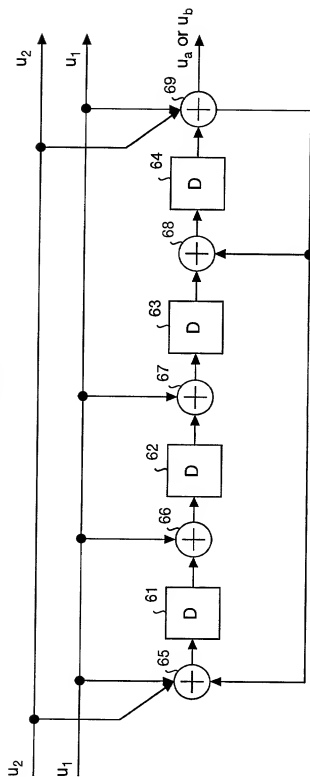


FIG.10

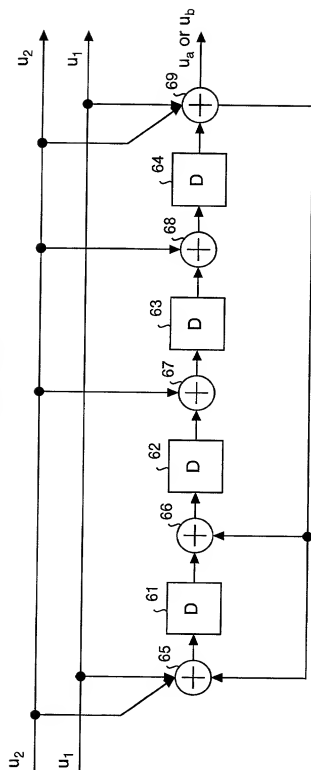


FIG.11

====generation polynomial=[10011,11101,10001]

u2	u1	u0	state
0	1	1	0111
0	0	1	1010
0	0	0	0101
0	0	1	1011
0	0	1	1100
0	0	0	0110
0	0	0	0011
0	0	1	1000
0	0	0	0100
0	0	0	0010
1	0	1	0000
0	0	0	0000
0	0	0	0000
0	0	0	0000
0	0	0	0000
0	0	0	0000

information weight=2 weight total=8

FIG.12

====generation polynomial=[11001,10001,10111]

u2	u1	u0	state
0	1	1	0100
0	0	0	0010
0	0	0	0001
0	0	1	1100
0	0	0	0110
0	0	0	0011
0	0	1	1101
0	0	1	1010
0	0	0	0101
0	0	1	1110
1	0	1	0000
0	0	0	0000
0	0	0	0000
0	0	0	0000
0	0	0	0000
0	0	0	0000

information weight=2 weight total=8

FIG.13

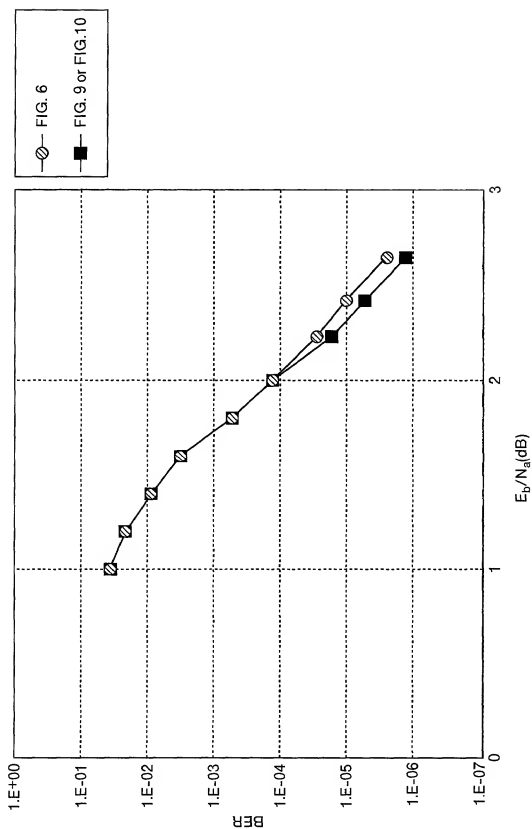


FIG.14

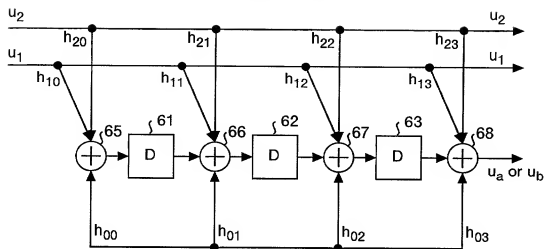


FIG.15

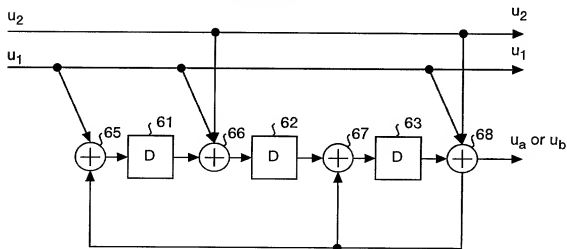


FIG.16

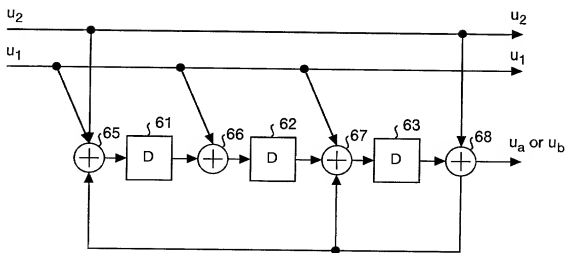


FIG.17

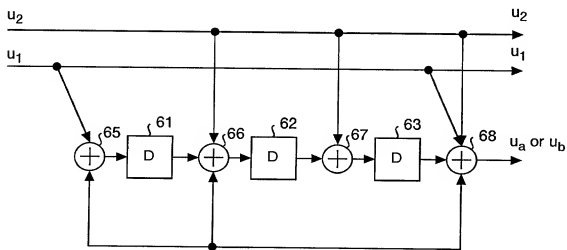


FIG.18

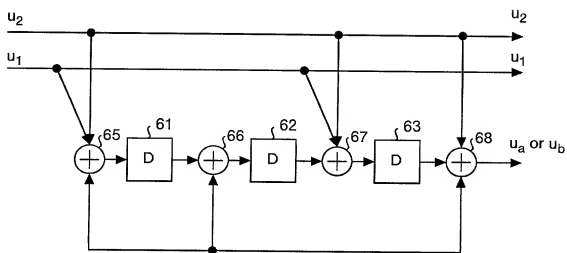




FIG.19

====generation polynomial=[1011,1101,0101]

u2	u1	u0	state
0	1	1	011
0	0	1	100
0	0	0	010
0	0	0	001
0	0	1	101
1	0	0	000
0	0	0	.
0	0	0	.
.	.	.	.
.	.	.	.

information weight=2    weight total=5

FIG.20

====generation polynomial=[1011,1110,1001]

u2	u1	u0	state
0	1	0	111
0	0	1	110
0	0	0	011
0	0	1	100
0	0	0	010
1	0	1	000
0	0	0	.
0	0	0	.
.	.	.	.
.	.	.	.
.	.	.	.

information weight=2    weight total=5

FIG.21

====generation polynomial=[1101,1001,0111]

u2	u1	u0	state
0	1	1	010
0	0	0	001
0	0	1	110
0	0	0	011
0	0	1	111
1	0	0	000
0	0	0	.
0	0	0	.
.	.	.	.
.	.	.	.
.	.	.	.

information weight=2    weight total=5

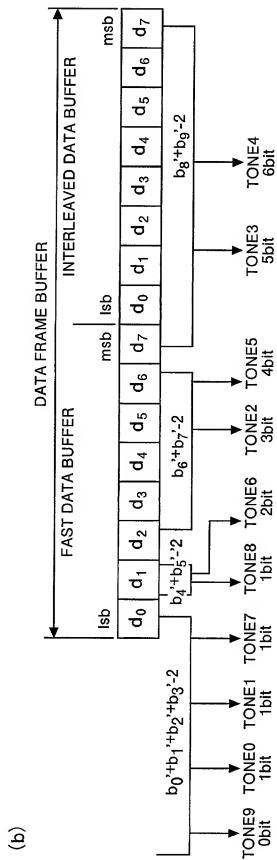
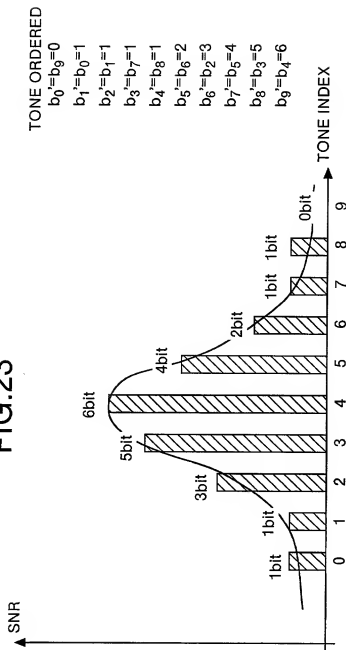
FIG.22

====generation polynomial=[1101,1010,1011]

u2	u1	u0	state
0	1	0	101
0	0	1	100
0	0	0	010
0	0	0	001
0	0	1	110
1	0	1	000
0	0	0	.
0	0	0	.
.	.	.	.
.	.	.	.
.	.	.	.
.	.	.	.

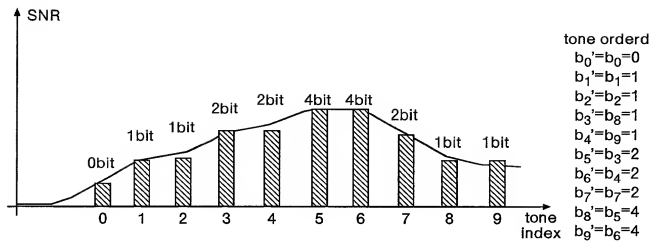
information weight=2    weight total=5

FIG.23



(a)

FIG.24



(b)

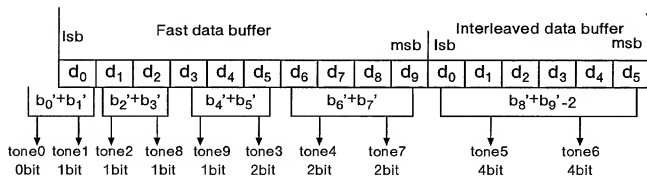
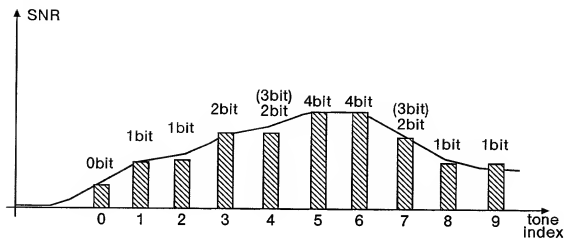


FIG.25

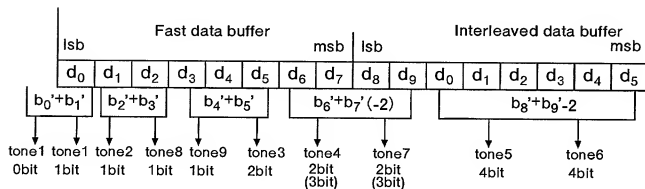
(a)



tone ordered

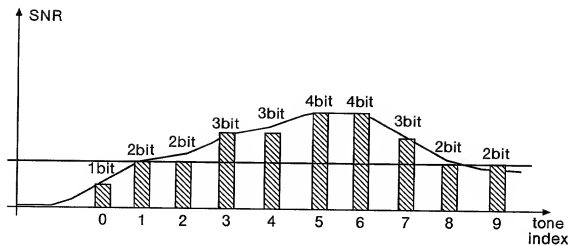
$b_0' = b_0 = 1$   
 $b_1' = b_1 = 2$   
 $b_2' = b_2 = 2$   
 $b_3' = b_3 = 2$   
 $b_4' = b_4 = 3$   
 $b_5' = b_5 = 3$   
 $b_6' = b_6 = 3$   
 $b_7' = b_7 = 3$   
 $b_8' = b_8 = 4$   
 $b_9' = b_9 = 4$

(b)



(a)

FIG.26



(b)

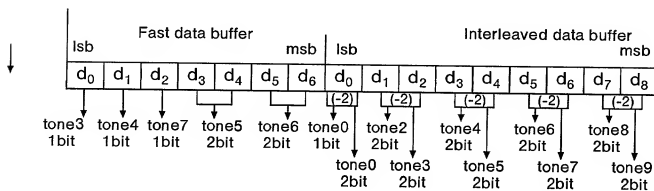




FIG.27

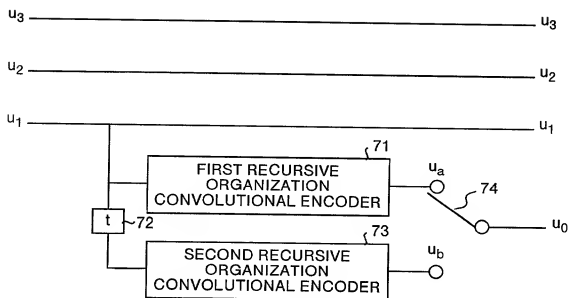


FIG.28

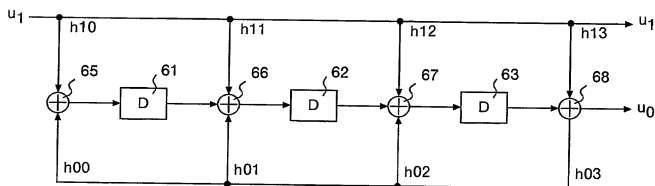


FIG.29

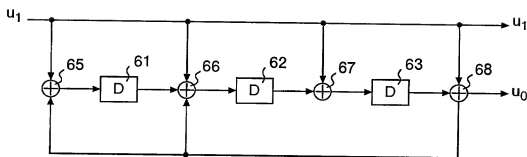


FIG.30

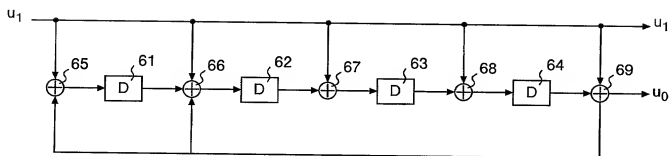
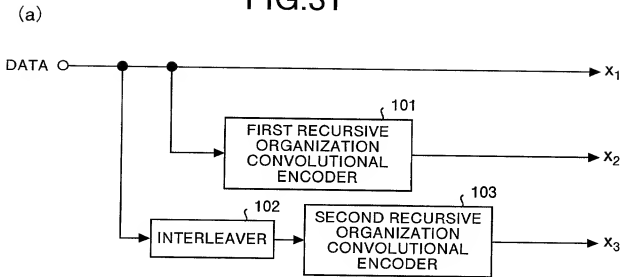


FIG.31



(b)

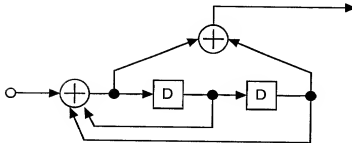


FIG.32

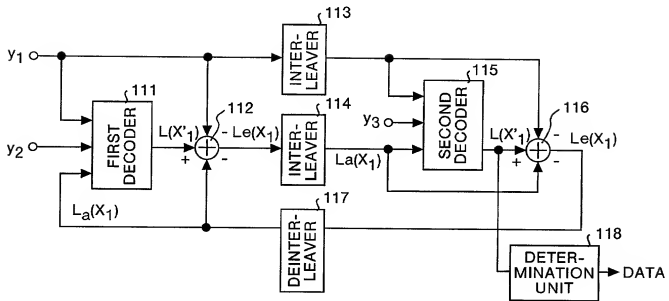


FIG.33

N	M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1	19	43	22	47	45	7	27	36	48	11	50	49	30	40	18	24	32	25	51	
2	54	74	70	92	77	80	90	88	99	65	93	98	97	76	59	73	102	75	91	56	
3	107	151	117	124	121	145	112	111	119	108	143	128	142	136	131	118	116	132	110	127	
4	160	192	188	162	205	193	168	191	208	186	202	200	187	192	176	190	175	210	199	207	
5	213	224	250	244	225	262	229	257	222	226	221	214	236	235	223	238	259	246	249	232	
6	266	268	274	292	293	296	305	279	307	285	272	286	275	295	302	270	280	310	294	299	
7	319	348	370	341	319	348	370	341	319	348	370	341	319	348	370	341	319	388	370	341	
8	372	405	414	402	418	379	378	397	407	376	382	374	420	394	411	406	395	392	396	373	
9	425	446	431	472	473	442	449	444	440	458	430	450	466	447	453	426	468	430	467	469	
10	478	479	481	485	493	509	488	499	521	512	494	511	492	507	484	491	505	490	483	489	
N	M	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	15	20	9	12	16	39	52	34	10	31	6	8	46	26	17	5	42	3	4	23	
2	63	104	64	72	81	58	105	85	89	67	82	79	69	71	60	94	66	61	62	83	
3	150	125	113	156	130	126	158	114	148	141	144	120	153	154	146	157	122	137	123	129	
4	206	173	197	194	201	167	211	179	183	209	166	178	203	180	163	185	169	171	184	189	
5	240	230	216	260	258	234	264	253	227	233	252	215	246	220	255	251	256	263	241	242	
6	314	306	282	316	312	300	319	315	309	291	290	287	218	304	276	298	311	297	308	288	
7	319	348	370	341	319	348	370	341	319	348	370	341	319	348	370	341	319	348	370	341	
8	386	404	380	412	387	385	423	390	381	393	377	416	417	398	388	419	413	421	375	401	
9	460	474	464	456	439	436	476	455	470	429	428	459	452	457	461	443	471	451	435	454	
10	501	525	520	510	490	503	529	528	522	514	498	519	508	486	495	543	496	515	500		
N	M	41	42	43	44	45	46	47	48	49	50	51	52	53							
1	13	35	29	21	28	2	38	33	44	41	37	14	0								
2	100	86	57	84	68	103	96	55	95	87	78	101	53								
3	134	147	149	133	155	138	115	140	152	109	135	139	106								
4	195	181	196	161	172	164	165	198	174	177	170	204	159								
5	254	239	218	231	228	245	237	247	261	217	219	243	212								
6	281	313	303	273	289	284	269	277	301	267	271	283	265								
7	319	348	370	341	319	348	370	341	319	348	370	341	318								
8	384	389	400	403	399	422	409	391	415	383	408	410	371								
9	448	475	433	463	434	432	441	427	437	445	462	465	424								
10	523	516	502	527	524	518	506	482	487	497	517	504	477								

FIG.34

M	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	1	19	43	22	47	45	7	27	36	48	11	50	49	44	30	40	18	24	32	25	51
2	1	21	17	39	24	27	37	35	46	12	40	45	44	23	6	20	49	22	38	3	
3	1	45	11	18	15	39	6	5	13	2	37	22	36	30	25	12	10	26	4	21	
4	1	33	29	3	46	34	9	32	49	27	43	41	28	23	17	31	16	51	40	48	
5	1	12	38	32	13	50	17	45	10	14	9	2	24	23	11	26	47	34	37	20	
6	1	3	9	27	28	31	40	14	42	20	7	21	10	30	37	5	15	45	29	34	
7	1	30	52	23	1	30	52	23	1	30	52	23	1	30	52	23	1	30	52	23	
8	1	34	43	31	47	8	7	26	36	5	11	3	49	23	40	35	24	21	25	2	
9	1	22	7	48	49	18	25	20	16	34	6	26	42	23	29	2	44	14	43	45	
10	1	2	4	8	16	32	11	22	44	35	17	34	15	30	7	14	28	3	6	12	
M	N	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	15	20	9	12	16	39	52	34	10	31	6	8	46	26	17	5	42	3	4	23	
2	10	51	11	19	28	5	52	32	36	14	29	26	16	18	7	41	13	8	9	30	
3	44	19	7	50	24	20	32	8	42	35	38	14	47	48	40	51	16	31	17	23	
4	47	14	38	35	42	8	52	20	24	50	7	19	44	21	4	26	10	12	25	30	
5	28	18	4	48	46	22	52	41	15	21	40	3	36	8	43	39	44	51	29	30	
6	49	41	17	51	47	35	52	50	44	26	25	22	13	39	11	33	46	32	43	23	
7	1	30	52	23	1	30	52	23	1	30	52	23	1	30	52	23	1	30	52	23	
8	15	33	9	41	16	14	52	19	10	22	6	45	46	27	17	48	42	50	4	30	
9	36	50	40	32	15	12	52	31	46	5	4	35	28	33	37	19	47	27	11	30	
10	24	48	43	33	13	26	52	51	49	45	37	21	42	31	9	18	36	19	38	23	
M	N	41	42	43	44	45	46	47	48	49	50	51	52	53							
1	13	35	29	21	28	2	38	33	44	41	37	14	0								
2	47	33	4	31	15	50	43	2	42	34	25	48	0								
3	28	41	43	27	49	32	9	34	46	3	29	33	0								
4	36	22	37	2	13	5	6	39	15	18	11	45	0								
5	42	27	6	19	16	33	25	35	49	5	7	31	0								
6	16	48	38	8	24	19	4	12	36	2	6	18	0								
7	1	30	52	23	1	30	52	23	1	30	52	23	0								
8	13	18	29	32	28	51	38	20	44	12	37	39	0								
9	24	51	9	39	10	8	17	3	13	21	38	41	0								
10	45	39	25	50	47	41	29	5	10	20	40	27	0								

N	M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	478	479	481	485	493	209	488	499	521	512	494	511	492	507	484	491	505	480	483	489	
2	425	446	431	472	473	442	449	444	440	458	430	450	466	447	463	426	468	438	467	489	
3	372	405	414	402	418	379	378	397	407	276	382	374	420	394	411	406	395	392	396	373	
4	319	348	970	341	319	348	970	341	319	348	370	341	319	348	370	341	319	348	370	341	
5	266	268	274	292	293	296	305	279	307	285	272	286	275	295	302	270	280	210	294	299	
6	213	224	250	244	225	262	229	257	222	226	221	214	236	235	223	238	259	246	249	232	
7	160	192	108	162	205	193	168	191	208	186	202	200	187	182	176	190	175	210	199	207	
8	107	151	117	124	121	145	112	111	119	108	143	128	142	136	131	118	116	132	110	127	
9	54	74	70	90	77	80	90	88	99	65	93	98	97	76	59	73	102	75	91	56	
10	1	19	43	22	47	45	7	27	36	48	11	50	49	30	40	18	24	32	25	51	
N	M	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	501	525	520	510	490	503	529	528	526	522	514	498	519	508	486	495	513	496	515	500	
2	460	474	484	456	439	436	476	455	470	429	428	459	452	457	461	443	471	451	135	454	
3	386	404	380	412	387	382	423	390	381	393	377	416	417	398	388	419	413	421	375	401	
4	319	348	370	341	319	348	370	341	319	348	370	341	319	348	370	341	319	348	370	341	
5	314	306	282	316	312	300	317	315	309	291	290	287	278	304	276	298	311	297	308	288	
6	240	230	216	260	258	234	264	253	227	233	252	215	248	220	255	251	256	263	241	242	
7	206	173	197	194	201	167	211	179	183	209	166	178	203	180	163	485	169	171	184	189	
8	150	125	113	156	130	126	150	114	148	141	144	120	153	154	146	157	122	137	123	129	
9	63	104	64	72	81	58	105	85	89	67	82	79	69	71	60	94	66	61	62	83	
10	15	20	9	12	16	39	52	34	10	31	6	8	46	26	17	5	42	3	4	23	
N	M	41	42	43	44	45	46	47	48	49	50	51	52	53							
1	523	516	502	527	524	518	506	482	487	497	517	504	477								
2	448	475	433	463	434	432	441	427	437	445	462	465	424								
3	384	389	400	403	399	422	409	391	415	383	408	410	371								
4	319	348	370	341	319	348	370	341	319	343	370	341	318								
5	281	313	303	273	289	284	269	277	301	267	271	283	265								
6	254	239	218	231	228	245	237	247	251	217	219	243	212								
7	195	101	196	161	172	164	165	198	174	177	170	204	159								
8	134	147	149	133	155	138	115	140	152	109	135	139	106								
9	100	86	57	84	68	103	96	55	95	87	78	101	53								
10	13	35	29	21	28	2	38	33	44	41	37	14	0								

FIG.35

FIG.36

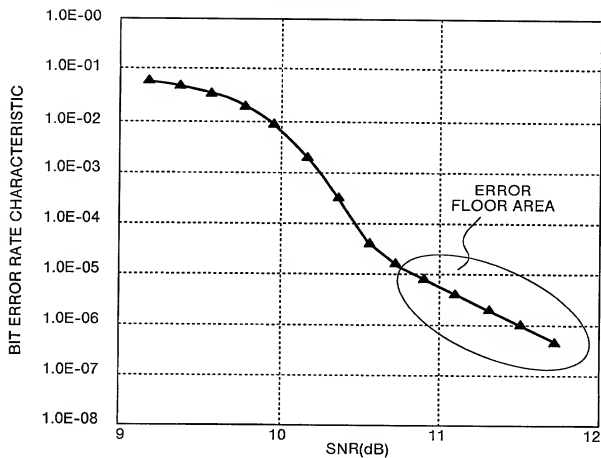
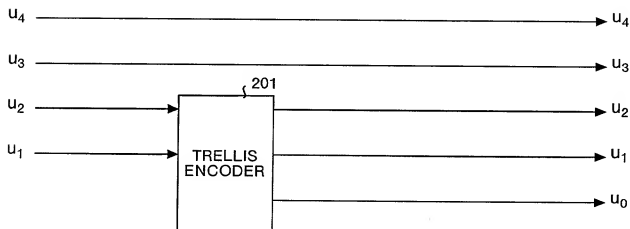


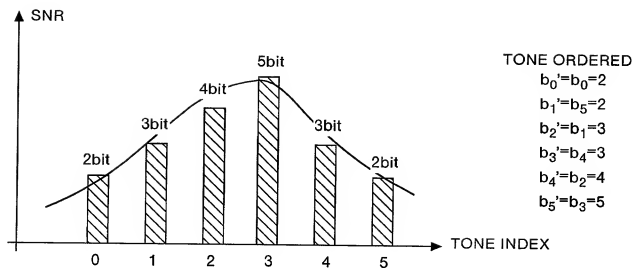
FIG.37





(a)

FIG.38



(b)

